Calendar No. 145

98TH CONGRESS, 1st Session | SENATE | REPORT No. 98-90

ACQUISITION OF WETLANDS AND OTHER WATERFOWL HABITAT

MAY 16, 1983.—Ordered to be printed

Mr. CHAFEE, from the Committee on Environment and Public Works, submitted the following

REPORT

[To accompany S. 1284]

The Committee on Environment and Public Works reports an original bill (S. 1284), to extend until October 1, 1985, the authority for advances to the migratory bird conservation fund and recommends that the bill do pass.

GENERAL STATEMENT

This legislation, in compliance with the reporting requirement of the Congressional Budget Act, extends until October 1, 1985, the period during which the Department of the Interior can acquire wetlands for migratory waterfowl with appropriations authorized by the Wetlands Loan Act of 1961. The bill also amends the act (16 U.S.C. 715k-5) to defer until October 1, 1985, the requirement to repay the loan.

The Wetlands Loan Act of 1961 allows the Government to borrow $200 million against future revenues from Federal migratory bird hunting and conservation stamps to supplement the approximately $15 million a year in stamp receipts earmarked for wetlands acquisition. If the act is not extended, 75 percent of these annual stamp revenues in fiscal year 1984 and thereafter will go toward repayment of the $147 million already advanced, leaving little for new acquisition. In addition, the authority to appropriate the balance of the authorized loan, $53 million, will lapse.

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The administration's legislative proposal, S. 978, would extend the act for 10 years and would delete the requirement to repay the loan.

The committee does not intend the Senate to act on this legislation until hearings on S. 978 and similar proposals have been held by the committee later this year.

Rollcall Votes

During the committee's consideration of this bill there was one rollcall vote. The committee ordered the bill reported on May 10, 1983, by a vote of 14 ayes and 0 nays.

Evaluation of Regulatory Impact

Section 11(b)(1) of rule XXVI of the Standing Rules of the Senate requires the committee to evaluate the regulatory impact of the reported bill.

This bill will impose no new regulatory burden.

Cost of Legislation

Section 403 of the Congressional Budget and Impoundment Act requires each report to contain a statement of the cost of the reported bill prepared by the Congressional Budget Office. That statement follows:

U.S. Congress,
Congressional Budget Office,
Washington, D.C., May 13, 1983.

Hon. Robert T. Stafford,
Chairman, Committee on Environment and Public Works, U.S. Senate, Washington, D.C.

Dear Mr. Chairman: Pursuant to section 403 of the Congressional Budget Act of 1974, the Congressional Budget Office has prepared the attached cost estimate for a bill to extend until October 1, 1985, the authority for advances to the migratory bird conservation fund.

Should the committee so desire, we would be pleased to provide further details on this estimate.

Sincerely,

Alice M. Rivlin, *Director.*

Congressional Budget Office, Cost Estimate, May 13, 1983

1. Bill number: Not yet assigned.

2. Bill title: A bill to extend until October 1, 1985, the authority for advances to the migratory bird conservation fund.

3. Bill status: As ordered reported by the Senate Committee on Environment and Public Works, May 10, 1983.

4. Bill purpose: The bill extends the authorization for appropriations from 1983 through 1985. This allows the continuation of the wetlands acquisition program, which is financed by advances to the migratory bird conservation fund.

5. Estimated cost to the Federal Government:

[By fiscal years, in millions of dollars]

	1984	1985	1986	1987	1988
Subject to appropriation action:					
Estimated authorization level	26.6	26.5			
Estimated outlays	23.5	26.5	3.1		
Direct spending authority:					
Estimated budget authority	12.9	13.5			
Estimated outlays	11.4	13.4	1.6		
Total budget impact:					
Estimated authorization level/budget authority	39.5	40.0			
Estimated outlays	34.9	39.9	4.7		

The costs of this bill fall within budget function 300.

Basis of Estimate.—The current authorization level for this program is $200 million, of which $146.9 million has been appropriated to date. Thus, the remaining authorization allowed by this bill over 2 years is $53.1 million. For the purpose of this estimate, it was assumed that the authorized amount would be appropriated in approximately equal amounts in 1984 and 1985.

In addition to the appropriated amounts, revenues generated by duck stamp sales have been available, under permanent authority, for spending on the wetlands acquisition program. However, under current law, 75 percent of the revenues generated by duck stamp sales would be paid to the Treasury, beginning in 1984, if this extension is not enacted. If this extension is enacted, all duck stamp revenues in excess of printing and sale costs will be available for wetlands acquisition. As a result, net budget authority under this direct spending provision would be greater than under current law by an amount equal to 75 percent of duck stamp revenues. This would result in estimated additional budget authority of $12.9 million in 1984, increasing to $13.5 million by 1985. Outlays are estimated based on historical spending rates for this program.

6. Estimated cost to State and local governments: None.

7. Estimate comparison: None.

8. Previous CBO estimate: On May 12, 1983, CBO prepared a cost estimate for H.R. 2395, the companion legislation to this bill. That bill extended the program through 1993, and the cost estimate reflects that difference.

9. Estimate prepared by: Mary Ann Curtin.

10. Estimate approved by: C. G. Nuckols for James L. Blum, Assistant Director for Budget Analysis.

Changes in Existing Law

Section 12 of rule XXVI of the Standing Rules of the Senate requires publication of any changes in existing law made by the reported bill.

This bill makes no changes in existing law except for the change in dates described above.

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Calendar No. 146

98TH CONGRESS
1st Session

SENATE

REPORT
No. 98–91

WATER RESOURCES RESEARCH ACT OF 1983

MAY 16, 1983.—Ordered to be printed

Mr. ABDNOR, from the Committee on Environment and Public Works, submitted the following

REPORT

[To accompany S. 684]

The Committee on Environment and Public Works, to which was referred the bill (S. 684) to authorize an ongoing program of water resources research, having considered the same, reports favorably thereon without amendment and recommends that the bill do pass.

GENERAL STATEMENT

S. 684, as introduced and reported, seeks to encourage a more active partnership between the Federal Government and non-Federal water resources researchers, one that is centered at the university community. This legislation will encourage investigations of basic scientific issues that may have a regional character or application, rather than fulfilling a specific need of a Federal agency.

The Federal Government annually spends several billions of dollars to construct traditional water resources projects—dams, levees, sewage treatment plants, and river and harbor channels. According to a report of the Water Resources Research Review Committee of the National Research Council, the entire Federal Government spends only 4 percent, or $380 million, for water resources research, development, demonstration, and technology transfer. Less than half of the "research" money goes to true research. And nearly all of the research that is undertaken is mission oriented within various Federal agencies and departments.

Neither basic scientific research nor research into regional problems—both encouraged by this legislation—fit neatly into any Federal water research effort outside this legislation.

Under existing law, a program similar to the one authorized by S. 684 was operated by the Office of Water Research and Technology (OWRT) within the Department of the Interior through fiscal year

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1982. OWRT helped to finance water research institutes established at 54 land-grant colleges, provided matching grants to individual researchers, and conducted its own research, development, testing, and demonstration programs, particularly in desalting technology. OWRT also maintained a clearinghouse of data and technical literature on water research. These authorities, funded recently at about $33 million yearly, came from the Water Research and Development Act of 1978 (Public Law 95–467).

Authorization for these authorities lapsed at the end of fiscal year 1982, and the Administration's budget request for fiscal year 1983 proposed no funds for any of the water research programs authorized by the 1978 Act. Subsequently, funding and authority for some of these activities during fiscal year 1983 was included in appropriations acts. The Office of Water Policy, within the Department of the Interior, was designated as the responsible body during this one-year authority.

This Committee has long recognized the strong bipartisan support in the Congress for a program of basic water resources research. This legislation was reported in the 97th Congress as S. 2494, and was passed by the Senate. The House took no action on that proposal. The net result of these events was the use of an appropriations action to continue a narrow basic research program, and the languishing of that program during the current fiscal year in the Office of Water Policy.

The Administration's budget for fiscal year 1984 again proposes that no funds be made available for any of the water research programs authorized by the 1978 Act. In the Committee's judgment, basic and applied water research is needed and is cost-effective. In the absense of new authorizing legislation, the probability of continued stalemate is high, and the prospects of moving forward on needed water resources research are low.

Therefore, S. 684 repeals that 1978 authorization, replacing it with a more focused approach centered on the 54 state institutes. In addition, the bill provides competitive matching grants to individuals and organizations to study specific water problems. The total annual authorization is $22.1 million.

The strength of the institutes is their location within the university community, a location where a multitude of disciplines can be concentrated on water problems, offering new and innovative approaches. This approach also disperses funds among institutes in every state, assuring the widest possible geographic search for information—from new drip irrigation techniques in the desert Southwest to lake-cycle research in the Northeast.

The Committee recognizes the need to augment the strength of some of this State-based research work on watter. The bill requires a gradually increased non-Federal contribution, and requires that a portion of that contribution be made in cash. Thus, those States and those universities that are less seriously committed to an effective water research program may be forced to drop out of the program.

S. 684 also encourages greater regional cooperation among the water institutes, as well as among the States. While the States are effective participants in the national effort to improve the utilization of our water resources, their value could be increased in some cases when they work together to manage their water resources on a regional basis.

For example, in phasing out the Federal operation of existing desalting facilities, the Secretary of the Interior is encouraged, under this bill, to transfer these facilities to the control of individual State institutes, or a regional consortium of institutes, which would then operate them. Thus, the expertise would not be lost, and there would be an emphasis on a new regional non-Federal approach. These facilities, would be eligible for matching funds under this Act.

This bill also authorizes a general water research matching grant program that is available to scientific experts, both individuals or groups. Through a competitive approach, the Committee expects the Secretary of the Interior to define and direct funds to the Nation's most pressing water research needs.

In implementing the new approaches in this legislation, the Secretary of the Interior should review the "Federal Water Resources Research: A Review of the Proposed Five-Year Program Plan," prepared in 1981 by the Water Resources Research Review Committee of the Commission on Natural Resources, National Research Council. In addition, the Secretary is invited to return to the Congress with proposals for a more effective and coordinated plan for water resources research. This would enable Congress to examine the program in preparation for possible legislation once this new five-year law expires.

The 1978 Act provides for the separate funding of the basic water research program and the program focused on saline water problems. This legislation combines funding to assure greater flexibility in selecting those research proposals that have the highest priority. Improvements in desalting technology may offer an opportunity for improving the quality of water pumped from underground aquifers for use in households, industry, and agriculture. The bill does not amend the existing authority pursuant to Public Law 95–84 and Public Law 96–457 to construct demonstration desalination plants.

Section-by-Section Analysis

Section 1 of the bill declares that the bill shall be cited as the "Water Resources Research Act of 1983."

Section 2 states a number of congressional findings relating to the national interest in water resources research. This section describes the existing problems with water resources utilization, especially the impairment of the quality of both surface and ground-water resources, and its consequent effect on available water supply. This section also defines the need to strengthen the skills and research capabilities of technical personnel related to water resource needs throughout the Nation.

Section 3 declares that the purpose of the bill is to augment basic water resource research and to direct such research toward practical solutions of our Nation's water problems.

Section 4 establishes a modified approach to the Federal support of the various water research institutes located at 54 land-grant colleges in every State, as well as the District of Columbia and three territories. The section encourages a greater non-Federal financial commitment to each research institute.

The present program of grants to the institutes requires no specific cash contribution by the non-Federal sponsor, and establishes a maximum level of funding per institute. S. 684 makes two changes in that

approach. During the initial two years. Federal funds must be matched on a one-to-one basis with non-Federal funds. In fiscal years 1986 and 1987 the non-Federal match increases to three-to-two; in fiscal year 1988, the match would be two non-Federal dollars to each Federal dollar. The non-Federal share for each institute need not be entirely in cash, but can be partially contributed in-kind.

The bill authorizes the Department of the Interior to distribute $8,100,000 among the research institutes during each of five fiscal years. If all institutes continue to participate, each of 54 institutes would receive $150,000 annually. If several institutes should decide not to participate, due to the increasingly strict non-Federal requirements, the $8,100,000 would be available to be distributed equally (and matched) among fewer institutes. Thus, there is the possibility that more than $150,000 yearly would be available to each institute, permitting the program to keep up with inflation.

The grants to the institutes can be made only after an institute submits a water research program, which contains assurance that the program was developed in close coordination with that State's department of water resources. This section also contains technical language to require that institutes be established only at a land-grant university or some other institution designated by act of the state legislature. There can be only one institute in a state.

Section 5 authorizes $13,000,000 annually for specific water research project grants on a wide variety of water problems listed in section 6. These grants will be available to any qualified individual or group. This includes, but is not limited to: State institutes, other universities, private or public corporations, river basin commissions, and foundations. The Secretary will award these research grants on a competitive basis. They must be matched on a one-to-one basis by non-Federal funds. In the case of basic research, which might otherwise not be undertaken, the Secretary of the Interior may adjust the matching requirement, as appropriate, to a higher Federal share. For the purposes of this section, basic research is that which is undertaken for the purpose of increasing knowledge or understanding of a subject without specifying the use of the results.

Section 6 specifies the type of research, from the basic hydrologic processes to conservation and reuse, that will be eligible for a section 5 research grant and which the section 4 institute programs should encourage. Work to disseminate or interpret scientific information is another important activity eligible for funding under this section.

Section 7 requires that information developed by water resources investigators under a grant authorized by section 4 or 5 be available to the general public.

Section 8 repeals the Water Research and Development Act of 1978 (Public Law 95–467).

Hearings

The Subcommittee on Water Resources conducted a hearing on issues related to S. 684. This hearing was held on March 14, 1983. Five witnesses discussed the need for a coordinated Federal policy and a continuing Federal effort in water research.

Rollcall Votes

Section 7(b) of Rule XXVI of the Standing Rules of the Senate and the rules of the Committee on Environment and Public Works require that any rollcall votes be announced in this report. There were no rollcall votes taken during Committee consideration of S. 684. The bill was approved by voice vote on May 10, 1983.

Evaluation of Regulatory Impact

In accordance with section 11(b) of Rule XXVI of the Standing Rules of the Senate, the Committee has evaluated the regulatory impact of the bill. In view of the fact that the bill primarily affects the internal operations of the Government, and reorganizes an existing function, none of its provisions create new regulatory authority.

Cost of Legislation

Section 403 of the Congressional Budget and Impoundment Control Act requires each report to contain a statement of the cost of the reported bill prepared by the Congressional Budget Office. That statement follows:

U.S. Congress,
Congressional Budget Office,
Washington, D.C., May 16, 1983.

Hon. Robert T. Stafford,
Chairman, Committee on Environment and Public Works, U.S. Senate, Washington, D.C.

Dear Mr. Chairman: Pursuant to Section 403 of the Congressional Budget Act of 1974, the Congressional Budget Office has prepared the attached revised cost estimate for S. 684, the Water Resources Research Act of 1983.

Should the Committee so desire, we would be pleased to provide further details on this estimate.

Sincerely,

James Blum
(For Alice M. Rivlin, Director).

Congressional Budget Office—Cost Estimate

May 16, 1983.

1. Bill number: S. 684.
2. Bill title: The Water Resources Research Act of 1983.
3. Bill status: As ordered reported by the Senate Committee on Environment and Public Works, May 10, 1983.
4. Bill purpose: This bill authorizes appropriations to continue the water resources research and development institute program currently administered by the Office of Water Policy and the research grant programs currently carried out by the Office of Water Research of the Bureau of Reclamation. President Reagan's budget requests for fiscal years 1983 and 1984 did not include funds for water resources research. However, these programs received an appropriation of $14 million in fiscal year 1983.

5. Estimated cost to the Federal Government:

	Millions
Authorization levels:	
Fiscal year:	
1984	$21.1
1985	21.1
1986	21.1
1987	21.1
1988	21.1
Estimated outlays:	
Fiscal year:	
1984	5.3
1985	16.9
1986	19.6
1987	21.1
1988	21.1

The costs of this bill fall within budget function 300.

Basis of estimate: The authorization level is stated in the bill. For the purpose of this estimate, it is assumed that all funds authorized will be appropriated prior to the beginning of each fiscal year. Based on historical information it is assumed that outlays will occur at a rate of 25 percent, 55 percent, 13 percent, and 7 percent over the four years following appropriation.

6. Estimated cost to State and local governments: Under the provisions of this bill, the $8.1 million authorized annually for the water resources research and development institute program must be matched by the institutes in the same amount as the federal appropriation in fiscal years 1984 and 1985, at one and one-half times the federal funding level in fiscal years 1986 and 1987, and at two times the federal share in fiscal year 1988. Thus, the institutes, which are established at state colleges or universities, would provide matching resources of at least $8 million per year in 1984 and 1985, $12 million per year in 1986 and 1987, and $16 million in 1988. (In 1983, $6.2 million in grants are being provided, with a $3.1 million match required.) A large portion of the funding contributed to this program by the institutes has been in the form of in-kind services, and because institutes are only partially funded by state governments, it is not expected that these matching provisions will have a significant impact on the budgets of state governments.

This bill also provides that matching grants in an amount equal to the federal appropriation must be contributed by the non-federal entities involved in the research grant programs funded in section 5 of the bill. However, S. 684 also stipulates that in the case where the Secretary of the Interior determines that research carried out under this program is of a basic nature and would not otherwise be undertaken, the proportion of the matching requirement is left to the Secretary's discretion. The maximum amount state and local government entities could be responsible for under the research grant program authorized in section 5 of this bill is $13 million in each of fiscal years 1984 through 1988. However, because these entities are likely to receive only a portion of the grants made available in this program, and because, at least in some cases, the matching grant portion is expected to be less than the federal share, it is anticipated that the actual annual expenditures by state and local governments resulting from this bill will be only a small portion of the $13 million.

7. Estimate comparison: None.

8. Previous CBO estimate: On May 11, 1983, the Congressional Budget Office prepared a cost estimate for S. 684, as ordered reported by the Senate Committee on Environment and Public Works, May 10, 1983. This estimate is identical to the previous one, except that it has been expanded to include a statement regarding the impact on state and local governments.

9. Estimate prepared by: Debbie Goldberg.

10. Estimate approved by:

C. G. NUCKOLS
(For James L. Blum,
Assistant Director for Budget Analysis).

CHANGES IN EXISTING LAW

In compliance with section 12 of rule XXVI of the Standing Rules of the Senate, changes in existing law made by the bill as reported are shown as follows: Existing law proposed to be omitted is enclosed in black brackets, new matter is printed in italic, existing law in which no change is proposed is shown in roman:

PUBLIC LAW 95-467—OCT. 17, 1978

AN ACT To promote a more adequate and responsive national program of water research and development, and for other purposes

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, This Act may be cited as the "Water Research and Development Act of 1978".

[SEC. 2. The Congress finds and declares that—

[(a) providing for the protection of the Nation's water resources, assuring an adequate supply of water of good quality for the production of food, materials, and energy for the Nation's needs, and increasing the efficient use of the Nation's water resources are essential to national economic stability and growth, and to the well-being of our people;

[(b) the Nation's capabilities for technological assessment and planning and for policy formulation for water resources must be strengthened at both the Federal and State levels;

[(c) there should be a continuing national investment in water-related research and technology which is commensurate with growing national needs; and

[(d) the manpower pool of scientists, engineers, and technicians trained in fields related to water resources constitutes an invaluable natural resource which should be increased, fully utilized, and regularly replenished.

[SEC. 3. It is the purpose of this Act to assist the Nation and the States through water resources science and technology—

[(a) to provide a supply of water sufficient in quantity and quality to meet the Nation's expanding needs for the production of food, materials, and energy;

[(b) to preserve and enhance our water resources and the water-related environment;

[(c) to promote conservation and efficient use of the Nation's water resources;

[(d) to promote research and development, demonstration, and technology transfer dealing with both quality and quantity of water resources;

[(e) to identify and find practical solutions to the Nation's water and water resources related problems;

[(f) to promote the training of scientists, engineers, and other skilled personnel in the fields related to water resources;

[(g) to foster and supplement present programs for the conduct of research, technology development and transfer, and innovative water resources management, conservation, and operating practices;

[(h) to provide for research, development, technology demonstration, and transfer with respect to converting saline and other impaired waters to waters suitable for municipal, agricultural, industrial, recreational, or other beneficial uses;

[(i) to disseminate information through the maintenance of a water resources scientific information center with adequate information bases so that the Nation's water research community, by utilizing the center, can be fully informed of research activities and other types of information necessary for them to effectively conduct their work;

[(j) to better coordinate the Nation's water resources and development programs; and

[(k) to enhance the capacity of the Federal water establishment, and of water interests nationwide for recommending to the President and the Congress changes in national water resources research and technology policy as appropriate.

[TITLE I—WATER RESOURCES RESEARCH AND DEVELOPMENT

[SEC. 101. (a) The Secretary of the Interior (hereafter in this Act referred to as the "Secretary") is hereby authorized and directed to assist in carrying on the work of a competent and qualified water resources research and technology institute, center, or equivalent agency (hereinafter referred to as "institute") at one college or university in each State, which college or university shall be a college or university established in accordance with the Act approved July 2, 1862 (12 Stat. 503; 7 U.S.C. 301 ff), entitled "An Act donating public lands to the several States and territories which may provide colleges for the benefit of agriculture and the mechanic arts" or some other institution designated by Act of the legislature of the State concerned: *Provided*, That (1) if there is more than one such college or university in a State established in accordance with said Act of July 2, 1862, funds under this section shall, in the absence of a designation to the contrary by act of the legislature of the State, be paid to the one such college or university designated by the Governor of the State to receive the same, subject to the Secretary's determination that such college or university has, or may reasonably be expected to have the capability of doing effective work under this title; (2) two or more States may cooperate in the designation of a single institute or regional institute, in which

event the sums assignable to all of the cooperating States shall be paid to such institute; (3) the designated State institute shall cooperate closely with other colleges and universities in the State with demonstrated research, information dissemination, and graduate training capabilities in developing a statewide program directed to resolving State and regional water and related land problems; and (4) the designated State institute shall cooperate closely with regional consortia, as may be designated by the Secretary, to increase the effectiveness of the nationwide network of institutes and for the purpose of regional coordination, particularly with river basin commissions and other interagency river basin organizations as may be established by the Congress.

[(b) (1) It shall be the duty of each such institute to plan and conduct and/or arrange for a component or components of the college or university with which it is affiliated or other qualified colleges or universities within the State, to conduct competent research and development including investigations and experiments of either a basic or practical nature, or both, in relation to water resources, to promote dissemination and application of the results of these efforts, and to provide for the training of scientists and engineers through such research, investigations, and experiment.

[(2) The research, investigations, experiments, and training may include, without being limited to, aspects of the hydrologic cycle; supply and demand for water; saline water conversion; conservation and best use of available supplies of water and methods of increasing such supplies; water reuse; and economic, legal, social, engineering, recreational, biological, geographic, ecological, and other aspects of water problems; scientific information dissemination activities, including identifying, assembling, and interpreting the results of scentific and engineering research on water resources problems; and providing means for improved communication of research results, having due regard for the varying conditions and needs for the respective States and regions, for water research and development projects now being conducted by agencies of the Federal and State governments, the agricultural and engineering experiment stations, and other university research centers, and for the need to avoid undue displacement of scientists and engineers elsewhere engaged in water resources research and development.

[(3) The annual program submitted by the State institutes to the Secretary for approval shall include assurances satisfactory to the Secretary, that such programs were developed in close consultation and collaboration with leading water resources officials within the State and region to promote research, training, information dissemination and other work meeting the needs of the State. Additionally, it shall be the duty of each State institute to provide the Secretary with periodic information, at the Secretary's discretion, on water resources research and development activities, needs, and priorities within the State which shall be coordinated with State, local, regional and river basin entities, and to cooperate with the Secretary in preparing periodic reports of ongoing research within the State and its funding by both Federal and non-Federal organizations. Institutes are required to see that notices of research projects are submitted to the center referred to under title III, section 302.

[(4) The designated State institutes shall cooperate with the Secretary in the development of five-year water resources research and development goals and objectives.

[(5) The designated institutes will receive comment on and transmit all research and development proposals from the academic community to the Secretary for consideration and funding.

[(c) There is further hereby authorized a program of technology transfer and/or information dissemination to be carried out by the State institutes. Such funds, as are appropriated for this purpose, shall be made available on a competitive basis to the State institutes, based on the merit of project or program proposals submitted to the Secretary, for the purpose of transferring research and development results to other organizations for further development, demonstration, and practical application.

[SEC. 102. Funds appropriated pursuant to this title, in addition to being available for expenses for research and development experiments, and training conducted under authority of this title, shall also be available for printing and publishing the results thereof in the furtherance of technology transfer and for planning and direction. The institutes are hereby authorized and encouraged to plan and conduct programs financed under this title in cooperation with each other and with such other agencies and individuals as may contribute to the solution of the water problems involved, and funds appropriated pursuant to this title, shall be available for paying the necessary expenses of planning, coordinating, and conducting such cooperative research.

[SEC. 103. (a) The Secretary is hereby charged with the responsibility for the proper administration of this title and, after full consultation with other interested Federal agencies, may prescribe such procedures, rules, and policies as may be necessary to carry out its provisions. He shall require a showing that institutes designated to receive funds have, or may reasonably be expected to have, the capability of doing effective work. He shall furnish such advice and assistance as will best promote the purposes of this title, participate in coordinating research initiated by the institutes under this title, indicate to them such lines of inquiry as to him seem most important, and assist the establishment and maintenance of cooperation among the institutes, other research organizations, the United States Department of the Interior, and other Federal establishments.

[(b) The Secretary shall develop a five-year water resources research program in cooperation with the institutes and appropriate water entities, indicating goals, objectives, priorities, and funding requirements.

[(c) The Secretary shall annually ascertain that the requirements of subsection 101(b) have been met as to each institute, whether it is entitled to receive its share of the annual appropriations for water resources research and development under section 401(a) of this Act and the amount which it is entitled to receive.

[SEC. 104. Nothing in this title shall be construed to impair or modify the legal relation existing between any of the colleges or universities under whose direction an institute is established and the government of the State in which it is located. and nothing in this title shall in any way be construed to authorize Federal control or direction of education at any college or university.

[SEC. 105. (a) The Secretary is authorized to make grants to institutes to match, on a dollar-for-dollar basis, funds available to institutes from non-Federal sources to meet the necessary expenses of specific water and related land resources research projects which the institute could not otherwise undertake, including the expenses of planning and coordinating regional projects by two or more institutes. Each application for a grant pursuant to this subsection shall, among other things, state the nature of the project to be undertaken, the period during which it will be pursued, the qualifications of the personnel who will direct and conduct, the importance of the project to the Nation, region, and State concerned, its relation to other known research projects theretofore pursued or currently being pursued, and the extent to which it will provide opportunity for training of water resources scientists. No grant shall be made under this subsection except for a project approved by the Secretary, and all grants shall be made upon the basis of the merit of the project, the need for the knowledge which it is expected to produce when completed, and the opportunity it provides for the training of water resources scientists.

(b) The Secretary is authorized to make grants to, and finance contracts and matching or other agreements with qualified educational institutions; private foundations or other institutions; and with private firms and individuals whose training, experience, and qualifications are adequate in his judgment for the conduct of water research and development projects; and with local, State, and Federal Government agencies to undertake research and development concerning any aspect of water-related problems which he may deem desirable in the national interest.

[SEC. 106. Water resources research and development programs carried out in accordance with this title may include, without being limited to water use conservation and efficiencies; water and related planning; saline water conversion; water reuse; management and operations; legal systems; protection and enhancement of the water-based environment; institutional arrangements; salinity management; and economic, social, and environmental impact assessment. Due consideration shall be given to priority problems identified by water and related land resources plannnig, data acquisition, and like studies conducted by other agencies and organizations.

[SEC. 107. As used in this title, the term "State" includes the District of Columbia, the Commonwealth of Puerto Rico, American Samoa, Guam, the Virgin Islands, the Northern Mariana Islands, and the Trust Territory of the Pacific Islands.

[SEC. 108. Contracts or other arrangements for water resource work authorized under this title with an institute, educational institution, or nonprofit organization may be undertaken without regard to the provisions of section 3648 of the Revised Statutes (31 U.S.C. 529) when, in the judgment of the Secretary, advance payments of initial expenses are necessary to facilitate such work.

[SEC. 109. (a) The Secretary is authorized to study, design, implement, operate, and maintain water resources programs and activities demonstrating the technical and economic viability of processes, systems, or techniques for the purpose of improving the water or water-related environment and to demonstrate the application of water re-

sources research and development results and technology for beneficial purposes.

[(b) (1) Funds appropriated pursuant to the authority provided by sections 401(d) and 403 for use under this section may not be expended until thirty calendar days (including days on which either the House of Representatives or the Senate are not in session because of an adjournment of more than three calendar days to a day certain) have elapsed following transmittal of a report to the chairman of the Committee on Interior and Insular Affairs and the chairman of the Committee on Science and Technology of the House of Representatives and the chairman of the Committee on Environment and Public Works of the United States Senate.

[(2) Such report shall present information that includes, but is not limited to, the location of the demonstration activities, the characteristics of the water and water-related problem, the processes or concepts to be demonstrated, the estimated initial investment cost of the demonstration, the estimated annual operating cost of the demonstration, the source of energy for the demonstration and its cost, environmental consequences of the demonstrtions; and the estimated costs associated with the demonstration considering the amortization of all components of the demonstration.

[(3) Such report shall also be accompanied by a proposed contract or agreement between the Secretary and a duly authorized Federal or non-Federal public or private entity, in which such entity shall agree to share cost to the extent deemed important to the purpose of the activity as determined by the Secretary. Such proposed contract or agreement may provide that either the contractual entity or the United States will develop the activity described in the report and that the United States will either operate and maintain the activity or may participate in the operation and maintenance during which, in either case, access to the activity and its operating data will not be denied to the Secretary or his representatives.

[(4) The Secretary is authorized to include in the proposed contract or agreement a provision for conveying all rights, title, and interests of the Federal Government to the Federal or non-Federal, public or private entity subject to a future right to reenter the activity for the purpose of financing at Federal expense modifications for advanced technology and for its operation and maintenance for a successive term under the same conditions as pertain to the original term.

[TITLE II—WATER RESEARCH AND DEVELOPMENT FOR SALINE AND OTHER IMPAIRED WATERS

[SEC. 200. Consistent with the Federal responsibility for water resources development and conservation by means of comprehensive planning, water resources development projects, protection of water quality standards, and other measures for the beneficial use of water from various sources, the Congress finds it necessary to provide for the development of technology for the conversion of saline and other impaired waters for beneficial uses. It is the policy therefore to assist and encourage the development of practical means to utilize saline water technology to convert impaired waters to any type from any

source to a quality suitable for municipal, industrial, agricultural, and other beneficial uses to transfer research and development results.

[SEC. 201. The Secretary is authorized and directed to—

[(a) conduct, encourage, and promote basic scientific research and fundamental studies to develop effective and economical processes and equipment for the purposes of converting impaired water into water suitable for beneficial uses;

[(b) pursue the findings of research and studies authorized by this title having potential practical applications, including application to matters other than water conversion, and to other supply sources such as brackish waters, staged development, and use with energy sources;

[(c) conduct engineering and technical work including the design, construction, and testing of various processes, systems, and pilot plants to develop saline water conversion processes to the point of demonstration;

[(d) study methods for recovery, beneficial uses and disposal of residuals, and marketing of byproducts resulting from the improvement or conversion of impaired water in an environmentally acceptable manner;

[(e) undertake economic studies and surveys to determine present and prospective costs of producing water for beneficial purposes in various parts of the United States by saline water conversion processes and, by means of models, or other methodologies, prepare and maintain information concerning the relation of such conversion processes and systems to other aspects of State, regional, and national comprehensive water resources planning.

[SEC. 202. (a) The Secretary is authorized to conduct preliminary investigations and explore potential cooperative agreements with non-Federal utilities and governmental entities in order to develop recommendations for Federal participation in the design, construction, operation, and maintenance of demonstration and prototype plants utilizing advanced saline water technologies for the production of water for beneficial use.

[(b) In carrying out the provisions of this section, the Secretary shall utilize the expertise of the water and power marketing agencies of the Department of the Interior or of other Federal agencies to insure that the recommended project and the supporting agreements are fully integrated and compatible with the water and power systems of the region.

[(c) The Secretary is authorized to accept financial and other assistance from any State or public agency in connection with studies or surveys relating to impaired water and facilities and to enter into contract with respect to such assistance.

[SEC. 203. The Secretary may issue rules and regulations to effectuate the purposes of this title.

[SEC. 204. As used in this title—

[(a) the term "saline and other impaired water" includes but is not limited to seawater, brackish water, mineralized ground or surface water, irrigation return flows, and other similarly contaminated waters;

[(b) the term "United States" extends to and includes the District of Columbia, the Commonwealth of Puerto Rico, American

Samoa, Guam, the Virgin Islands, the Northern Mariana Islands, and the Trust Territory of the Pacific Islands;

[(c) the term "pilot plant" means an experimental unit of sufficient size used to evaluate and develop new or improved processes or systems and to obtain technical and engineering data;

[(d) the term "demonstration" means a plant of sufficient capacity and reliability to demonstrate on a day-to-day operating basis that the process or system is feasible and that such process or system has potential for application to water system improvement;

[(e) the term "prototype" means a full-size, first-of-a-kind production plant used for the development and study of full-sized technology, energy, and process economics.

[SEC. 205. (a) Subsection 2(a) of the Act of August 2, 1977 (Public Law 95–84) is hereby amended by striking "four" and inserting "five" and by striking "Puerto Rico, Virgin Islands, and Guam:" and inserting "the District of Columbia, the Commonwealth of Puerto Rico, American Samoa, Guam, the Virgin Islands, the Northern Mariana Islands, and the Trust Territory of the Pacific Islands:".

[(b) Subsection 2(b) of the Act of August 2, 1977 (Public Law 95–84) is hereby amended by striking the period at the end of the third full sentence and adding the following: ": *Provided*, That, the Secretary may waive the obligation of the non-Federal public entity to furnish brine disposal facilities if he finds that such entity is unable financially to bear the cost of such facilities.".

[(c) In addition to the sums previously authorized to be appropriated to carry out the purpose of section 2 of the Act of August 2, 1977 (Public Law 95–84) there is hereby authorized to be appropriated for the fiscal year ending September 30, 1980 and thereafter, the sum of $10,000,000 to remain available until expended.

[TITLE III—TECHNOLOGY TRANSFER AND INFORMATION DISSEMINATION

[SEC. 300. The Secretary is authorized to conduct a research assessment and technology transfer program which transfers research and development results to other organizations and individuals for further development and practical application to water and water-related problems. The Secretary may enter into agreements with the State and local governments and with other public and private organizations and individuals, including cost-sharing or cost-participation agreements, for the transfer or application of research results for the solution of water-related problems and to further the transfer developed by programs authorized under this Act. The Secretary may issue publications and may conduct seminars, conferences, training sessions, or use other such techniques he deems necessary to expedite the transfer of research results and technology development. The technology transfer activities will be coordinated with activities undertaken under titles I and II of this Act.

[SEC. 301. The Secretary is further authorized to maintain a national center for the acquisition, processing, and dissemination of information dealing with all areas of water resources research, technology development, and demonstration. Each Federal agency engaged

in water resources including research, technology development, and demonstration, shall cooperate by providing the center with documents and other pertinent information. The center shall (a) maintain for general use a collection of water resources information provided by Federal and non-Federal government agencies, colleges, universities, private institutions, and individuals; (b) issue publications or utilize other media to disseminate research, technology development, and demonstration information for the purposes of this Act and enter into agreements with public or private organizations or individuals to stimulate acquisition and dissemination of information, thus contributing to a comprehensive, nationwide program of research and development in water resources and the avoidance of unnecessary duplication of effort; (c) make generally available abstracts and other summary type information concerning water resources activities including research projects accomplished and in progress by all Federal agencies and by non-Federal agencies, private institutions, and individuals, to the extent such information can be obtained, and reports completed on research projects funded under provisions of this Act; and (d) in carrying out the information dissemination activities authorized by this section, the Secretary shall to the extent feasible use the resources and facilities of other agencies and of the clearinghouse for scientific, technical, and engineering information established in the Department of Commerce pursuant to sections 1151 through 1157 of title 15, United States Code.

[SEC. 302. There shall be established, in such agency and location as the President determines to be desirable, a center for cataloging current scientific research in all fields of water resources. Each Federal agency doing water resources research shall cooperate by providing the cataloging center with information on work underway. The cataloging center shall classify and maintain for general use a file of water resources research and investigation projects in progress or scheduled by all Federal agencies and by such non-Federal agencies of government, colleges, universities, private institutions, firms, and individuals as voluntarily may make such information available.

TITLE IV—GENERAL PROVISIONS

[SEC. 400. (a) As used in this Act, the term "Secretary" means the Secretary of the Interior.

[(b) In carrying out his functions under this Act, the Secretary may:

[(1) make grants to educational institutions and scientific organizations, and enter into contracts with institutions and organizations and with industrial or engineering firms;

[(2) acquire the services of chemists, physicists, engineers, and other personnel by contract or otherwise;

[(3) utilize the facilities of Federal scientific laboratories;

[(4) establish and operate necessary facilities and test sites to carry on the continuous research, testing, development, and programing necessary to effectuate the purpose of this title;

[(5) acquire processes, technical data, inventions, patent applications, patents, licenses, land and interests in land (including water rights), plants and facilities, and other property or rights

by purchase, license, lease, or donation pursuant to the Federal Property and Administrative Services Act (40 U.S.C. 471) as amended, where applicable;

[(6) assemble and maintain pertinent and current scientific literature, publications, patents, licenses, land and interests in land (including water rights thereto);

[(7) cause onsite inspections to be made of promising projects, domestic and foreign, and in the case of projects located in the United States, cooperate and participate in their development when the purpose of this title will be served thereby;

[(8) foster and participate in regional, national, and international conferences relating to water resources;

[(9) accept financial and other assistance from any local, State, Federal, or other agency or entity in connection with studies or surveys relating to water problems and facilities and enter into contracts with regard to such assistance;

[(10) coordinate, correlate, and publish information with a view to advancing the development of practicable water conversion projects; and

[(11) cooperate with other Federal departments and agencies, with State and local departments, agencies, and instrumentalities, and with interested persons, firms, institutions, and organizations.

[SEC. 401. (a) (1) There is hereby authorized to be appropriated for the purpose of carrying out the program described in subsection 101(a) of this Act an amount sufficient to provide $150,000 to each participating institute, on a cost-sharing basis, for the fiscal year ending September 30, 1979, and an amount sufficient to provide $175,000 to each participaitng institute on a cost-sharing basis, for the fiscal year ending September 30, 1980.

[(2) There is authorized to be appropriated, on a cost-sharing basis, for the purpose of carrying out the provisions of subsection 101(c) of this Act the sum of $750,000 for the fiscal year ending September 30, 1979, and the sum of $1,350,000 for the fiscal year ending September 30, 1980, all to remain available until expended.

[(2) Cost sharing under sections 101(a) and 101(c) shall be on the basis of two Federal shares to not less than one non-Federal share. Federal funds made available under this section shall not be used for support of indirect costs as defined by current Federal regulations; however such indirect costs may be credited as a non-Federal contribution to the total cost of activities to be carried out pursuant to the Federal grant or contract.

[(b) There is authorized to be appropriated for purposes of carrying out the provisions of section 105(a) of this Act for the fiscal year ending September 30, 1979, the sum of $6,000,000, and for the fiscal year ending September 30, 1980 the sum of $8,500,000, all to remain available until expended, to match on a dollar-for-dollar basis, funds made available by non-Federal sources to meet the necessary expenses of specific water resources research and development projects which could not otherwise be undertaken.

[(c) There is authorized to be appropriated for purposes of carrying out the provisions of section 105(b) of this Act for the fiscal year ending September 30, 1979, the sum of $5,200,000, and for the fiscal

year ending September 30, 1980 the sum of $8,000,000, all to remain available until expended, which shall be available on a competitive basis to any organization or individual to finance grants, contracts, matching grants, or other arrangements which equal 100 per centum, or any lesser per centum of the total cost of the project involved.

[(d) There is authorized to be appropriated for purposes of carrying out the provisions of section 109 of this Act for the fiscal year ending September 30, 1980, the sum of $1,000,000 to remain available until expended, which shall be available on a competitive basis to any organization or individual to finance projects pursuant to the terms of said section 109.

[SEC. 402. (a) There is authorized to be appropriated to carry out the provisions of title II of this Act for the fiscal year ending September 30, 1979, the sum of $12,000,000, and for the fiscal year ending September 30, 1980, the sum of $14,000,000 all of which is to remain avaiable until expended The categories for which such funds are authorized are research, development and demonstration plant studies. The funds appropriated to such authorization shall be distributed to the foregoing categories as determined by prevailing budgetary priorities.

[(b) Not more than 5 per centum of the funds to be made available in any fiscal year for research under the authority of this title may be expended for foreign activities subject to the approval of the Secretary of State to assure that such activities are consistent with the foreign policy objectives of the United States, in cooperation with public or private agencies in foreign countries for research useful to the programs in the United States.

[SEC. 403. There is authorized to be appropriated the sum of $4,464,000 for the fiscal year ending September 30, 1979, and the sum of $5,100,000 for the fiscal year ending September 30, 1980, to carry out the sections of titles, I, II, III, and IV of this Act other than those for which special specific authorizations are made.

[SEC. 404. Each application for a grant, pursuant to this Act, shall, among other things, state the nature of the project to be undertaken, the period during which it will be pursued, the water problem it addresses, the qualifications of the personnel who will direct and conduct it, the importance of the project to the water-related economy of the Nation, the need for and expected utilization of the results, the region and the State concerned, its relation to other known research projects previously conducted or currently being pursued, the procedures by which the results can be disseminated, and the extent to which it will provide opportunities for the training of water resources scientists and engineers. No grants shall be made except for projects approved by the Secretary and all grants shall be made upon the basis of the merit of the project, the need for the knowledge it is expected to produce when completed, and the opportunities it provides for the training of water resources scientists and engineers.

[SEC. 405. (a) Sums appropriated pursuant to this Act may be paid at such times and in such amounts during each fiscal year as determined by the Secretary and upon vouchers approved by him. Except as may be otherwise specified by this Act, funds received pursuant to such payment may be used for any allowable costs within the meaning of the Federal procurement regulations that establish principles for

determining costs applicable to research and development under grants and contracts with educational institutions.

[(b) Each State institute operating pursuant to title I of this Act shall have an officer appointed by its governing authority who shall receive and account for all funds paid to the institute under provisions of this Act and who shall provide to the Secretary an annual statement of the amounts received under any of the provisions of this Act during the preceding fiscal year, and of its disbursement. If any of the moneys received by the authorized receiving officer of any State institute under the provisions of this Act shall, by any action of contingency, be found by the Secretary to have been improperly diminished, lost, or misapplied, it shall be replaced and until so replaced no subsequent disbursement of Federal funds shall be made to any institute of such State.

[SEC. 406. (a) The Secretary shall cooperate fully with, and shall obtain the continuing advice and cooperation of, all agencies of the Federal Government concerned with water problems, State and local governments, and private institutions and individuals, to assure that the programs conducted under this Act will supplement and not duplicate other water research and technology programs, will stimulate research and development in neglected areas, and will provide a comprehensive, nationwide program of water resources research and development. In order to further these purposes, as well as to assure research undertaken by the Secretary on wastewater treatment and treatment of water for potable use is most responsive to needs in implementing the Federal Water Pollution Control Act, as amended (Public Law 92–500), and the Safe Drinking Water Act, as amended (Public Law 93–523), the Secretary will consult with the Administrator of the Environmental Protection Agency in developing and implementing programs in these areas. The Secretary will encourage utilization of the center referred to in title III, section 302, for cataloging current research projects in order to assure that programs conducted under this Act will supplement and not duplicate other research and technology programs and will encourage other Federal agencies to do likewise.

[(b) The President shall, by such means as he deems appropriate, clarify agency responsibilities for Federal water resources research and development and provide for interagency coordination of such research, including the research authorized by this Act. Such coordination shall include (1) continuing review of the adequacy of the Government-wide program in water resources research and development and identification of technical needs in various water resources research categories, (2) identification and elimination of duplication and overlaps between two or more programs, (3) recommendations with respect to allocation of technical effort among the Federal agencies, (4) review of technical manpower needs and findings concerning the technical manpower base of the program, (5) recommendations concerning management policies to improve the quality of the Government-wide research effort, and (6) actions to facilitate interagency communication at management levels.

[(c) The Secretary shall report within one year of the date of enactment of this Act to the chairman of the Committee on Science and Technology of the House of Representatives concerning actions taken by the Secretary and the President to implement this section.

[SEC. 407. (a) Property acquired by the Secretary under this Act for use in furtherance of the purposes of this Act may be conveyed to a cooperating institute, educational institution, or nonprofit organization in accordance with the Federal Property and Administrative Services Act of 1949, as amended.

[(b) The Secretary may dispose of water and byproducts resulting from his operations under this Act. All moneys received from dispositions under this Act shall be paid into the Treasury as miscellaneous receipts except where such operations may be undertaken as a part of a Federal reclamation project in which case the financial provisions of the reclamation laws (332 Stat. 388 and Acts amendatory thereof and supplementary thereto) shall govern.

[SEC. 408. With respect to patent policy and to the definition of title to, and licensing of inventions made or conceived in the course of, or under any contract or grant pursuant to this Act, and notwithstanding any other provision of law, the Secretary shall be governed by the provisions of sections 9 and 10 of the Federal Nonnuclear Energy, Research, and Development Act of 1974 (Public Law 93–577; 88 Stat. 1887, 1891; 42 U.S.C. 5908, 5909): *Provided however*, That subsections (l) and (n) of section 9 of such Act shall not apply to this Act: *Provided further, however*, That, subject to the patent policy of section 408, all research or development contracted for, sponsored, cosponsored, or authorized under authority of this Act, shall be provided in such manner that all information, data, and knowhow, regardless of their nature or mediums, resulting from such research and development will (with such exceptions and limitations, if any, as the Secretary may find to be necessary in the interest of national defense) be usefully available for practice by the general public consonant with the purpose of this Act.

[SEC. 409. The institutes shall submit a summary report to the Secretary on or before January 31 of each year which highlights research and development work accomplished during the preceding fiscal year, the status of projects underway, and recommended future projects. This report is in addition to such other reports as may be required by sections 101(b) and 405(b) of this Act. The Secretary shall submit a summary report to the President and the Congress on or before April 1 of each year which summarizes program activities of the preceding fiscal year and projects for the future.

[SEC. 410. (a) The Water Resources Research Act of 1964 (Public Law 88–379, 78 Stat. 329; 42 U.S.C. 1961 et seq.), as amended, and the Saline Water Conversion Act of 1971 (Public Law 92–60, 85 Stat. 159; 42 U.S.C. 1959 et seq.), as amended, are hereby repealed.

[(b) Nothing elsewhere in this Act is intended to repeal, supersede, or diminish existing authorities or responsibilities of any agency of the Federal Government concerning water resources.

[(c) Nothing in this Act shall be construed to alter existing law with respect to the ownership and control of water.

[SEC. 411. Any rules, regulations, guidelines, interpretations, orders, or requirements of general applicability prescribed by the Secretary of the Interior in connection with, or affecting, the administration of any program authorized by this Act or by section 2 of the Act of August 2, 1977 (Public Law 95–84) shall be transmitted to the Speaker of the House of Representatives and the President of the Senate and shall

not become effective for thirty days after the date of such transmittal. The thirty day period shall be deemed to run without interruption except during periods when either House is in adjournment sine die, in adjournment subject to the call of the Chair, or in adjournment to a day certain for a period of more than four consecutive days.

[SEC. 412. Notwithstanding any other provision of this Act, authority to enter into contracts or cooperative agreements and to make payments under this Act shall be effective only to the extent or in such amounts as are provided in advance in appropriation Acts.]

SEC. 2. The Congress finds and declares that—

(a) the existence of an adequate supply of water of good quality for the production of materials and energy for the Nation's needs and for the efficient use of the Nation's energy and water resources is essential to national economic stability and growth, and to the well-being of the people;

(b) there is an increasing threat of impairment to the quantity and quality of surface and ground-water resources;

(c) the Nation's capabilities for technological assessment and planning and for policy formulation for water resources must be strengthened at the Federal, State, and local governmental levels;

(d) there should be a continuing national investment in water and related research and technology commensurate with growing national needs;

(e) it is necessary to provide for the research and development of technology for the conversion of saline and other impaired waters to a quality suitable for municipal, industrial, agricultural, recreational, and other beneficial uses; and

(f) the pool of scientists, engineers, and technicians trained in fields related to water resources constitutes an invaluable natural resource which should be increased, fully utilized, and regularly replenished,

SEC. 3. It is the purpose of this Act to assist the Nation and the States in augmenting their water resources science and technology as a way to—

(a) assure supplies of water, sufficient in quantity and quality, to meet the Nation's expanding needs for the production of food, materials, and energy;

(b) identify and find practical solutions to the Nation's water and water resources related problems, particularly those problems related to impaired water quality;

(c) promote the interest of State and local governments as well as private industry in research and the development of technology that will reclaim waste water and to convert saline and other impaired waters to waters suitable for municipal, industrial, agricultural, recreational, and other beneficial uses; and

(d) coordinate more effectively the Nation's water resources research programs.

SEC. 4 (a) The Secretary of the Interior (hereinafter referred to as the "Secretary") is authorized and directed to assist the work of any water resources research and technology institute, center, or equivalent agency (hereinafter referred to as the "institute") established in the States in accordance with the terms of subsection (f) of this section.

(b) Each designated institute shall—

(1) have responsibility for planning, conducting, and/or arranging for competent research in relation to water resources. including investigations and experiments of either a basic or practical nature, or both; to promote the dissemination and application of the results of these efforts; and to provide for the training of scientists and engineers through such research, investigations, and experiments, and

(2) cooperate closely with other colleges and universities in the State that have demonstrated capabilities for research, information dissemination, and graduate training in order to develop a statewide program designed to resolve State and regional water and related land problems. Such institute shall also cooperate closely with regional consortia, as may be designated by the Secretary to increase the effectiveness of the institutes and for the purpose of regional coordination.

(c) Prior to the receipt each fiscal year of funds authorized by subsection (e) of this section, each institute shall submit to the Secretary for his approval a water research program that includes assurances, satisfactory to the Secretary, that such program was developed in close consultation and collaboration with the director of that State's department of water resources, or similar agency, and other leading water resources officials with the State, including interested members of the public. The program described in the preceding sentence shall include plans to promote research, training, information dissemination, and other activities meeting the needs of the State and Nation, and encourage regional cooperation among institutes in research into areas of water management, development, and conservation that have a regional or national character.

(d) From the sums appropriated pursuant to subsection (e) of this section, the Secretary shall make grants to each designed institute to be matched on a basis of no less than one non-Federal dollar for every Federal dollar during the fiscal years ending September 30, 1984, and September 30, 1985, one and one-half non-Federal dollars for each Federal dollar during the fiscal years ending September 30, 1986, and September 30, 1987, and two non-Federal dollars for each Federal dollar during the fiscal year ending September 30, 1988.

(e) There is hereby authorized to be appropriated to the Secretary for the purpose of carrying out this section the sum of $8,100,000 during each of the fiscal years ending September 30, 1984, through September 30, 1988.

(f) For the purposes of this section, an institute may be established at one college or university in each State, which was established in accordance with the Act approved July 2, 1862 (12 Stat. 503; 7 U.S.C. 301ff), entitled "An Act donating public lands to the several States and territories which may provide colleges for the benefit of agriculture and the mechanic arts" or some other institution designated by act of the legislature of the State concerned: Provided, That (1) if there is more than one such college or university in a State established in accordance with said Act of July 2, 1862, funds under this section shall, in the absence of a designation to the contrary by act of the legislature of the State, be paid to the one such college or university designated by the Governor of the State to receive the same, subject

to the Secretary's determination that such college or university has or may reasonably be expected to have the capability of doing effective work under this title; (2) two or more States may cooperate in the designation of a single institute or regional institute, in which event the sums otherwise allocated to institutes in each of the cooperating States shall be paid to such regional institute.

SEC. 5. (a) (1) In addition to the grants authorized by section 4 of this Act, the Secretary is authorized to make grants, on a dollar-for-dollar matching basis, to the institutes established pursuant to section 4 of this Act, as well as other qualified educational institutions, private foundations, private firms, individuals, and agencies of local or State government for research concerning any aspect of a water-related problem which the Secretary may deem to be in the national interest, including the operation of test facilities.

(2) In cases where the Secretary determines, according to criteria established by him, that research under this section is of a basic nature which would not otherwise be undertaken, the Secretary may approve grants under this section on a matching requirement other than that specified in paragraph (1) of this subsection.

(b) Each application for a grant pursuant to this section shall state the nature of the project to be undertaken, the period during which it will be pursued, the qualifications of the personnel who will direct and conduct it, the importance of the project to the Nation as well as to the region and State concerned, it's relation to other known research projects previously or currently being pursued, and the extent to which it will provide an opportunity for the training of water resources scientists. No grant shall be made under this section except for a project approved by the Secretary, and all grants shall be made upon the basis of the merit of the project and the need for the knowledge it is expected to produce when completed.

(c) The sum of $13,000,000 is authorized to be appropriated to the Secretary for the purposes of grants under this section, as well as for administration of grants under this section and grants to the institutes under section 4 of this Act for each of the fiscal years ending September 30, 1984, through September 30, 1988.

SEC. 6. The type of research to be undertaken under the authority of section 5 of this Act and to be encouraged by the institutes established under section 4 of this Act shall include, without being limited to:

(a) Aspects of the hydrologic cycle;

(b) Supply and demand for water;

(c) Demineralization of saline and other impaired waters;

(d) Conservation and best use of available supplies of water and methods of increasing such supplies;

(e) Water reuse;

(f) Depletion and degradation of ground water supplies

(g) Improvements in the productivity of water when used for agricultural and commercial purposes;

(h) The economic, legal, engineering, social, recreational, biological, geographic, ecological, and other aspects of water problems;

(i) Scientific information dissemination activities, including identifying, assembling, and interpreting the results of scentific and engineeding research on water resources problems; and

(j) Providing means for improved communication of research results, having due regard for the varying conditions and needs for the respective States and regions.

SEC. 7. Notwithstanding any other provision of law, the Secretary shall be governed by the provisions of sections 9 and 10 of the Federal Nonnuclear Energy, Research, and Development Act of 1974 (Public Law 93–577; 88 Stat. 1887, 1891; 42 U.S.C. 5908–5909) with respect to patent policy and to the definition of title to, and licensing of inventions made or conceived in the course of, or under any contract or grant pursuant tot his title; Provided, however, That subsections (1) and (n) of section 9 of such Act shall not apply to this Act: and Provided further, That, subject to the patent policy of section 408, all research or development contracted for, sponsored, cosponsored, or authorized under authority of this title, shall be provided in such manner that all information, data, and know-how, regardless of their nature or mediums, resulting from such research and development will (with such exceptions and limitations, if any, as the Secretary may find to be necessary in the interest of national defense) be usefully available for practice by the general public.

SEC. 8. (a) Public Law 95–467 is repealed.

(b) Rules and regulations issued, prior to the date of enactment of this Act, under the authority of Public Law 95–467 shall remain in full force and effect under this Act until superseded by new rules and regulations promulgated under this Act.

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